

### **REMARKS**

Claims 12-28 are pending in this application. Reconsideration is requested based on the following remarks.

#### **Information Disclosure Statement:**

European Publication No. EP 1398910, which was submitted with the Information Disclosure Statement filed May 1, 2006, was not considered because there was no English translation. EP 1398910 is a publication of European Patent Application No. EP20020020647A. A copy of US Patent Application Publication No. 2006/0040670, which claims priority to European Patent Application No. EP20020020647 as well, and thus serves as an English translation thereof, is submitted herewith. Consideration is earnestly solicited.

#### **Claim Rejections - 35 U.S.C. § 102:**

Claims 12-28 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent Application Publication No. 2003/0224787 to Gandolfo et al. (hereinafter "Gandolfo"). The rejection is traversed to the extent it would apply to the claims as amended. Reconsideration is earnestly solicited.

The third clause of claim 12 recites:

Using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission.

Gandolfo neither teaches, discloses, nor suggests "using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission," as recited in claim 12. Gandolfo, rather, teaches route and control of radio transmission between devices *within* a communications system, as acknowledged graciously in the Office Action at page 3, not "at the radio device," as recited in claim 12.

Gandolfo, in fact, is discovering and updating wireless links between multiple *overlapping* or *adjacent* wireless networks, not "at the radio device," as recited in claim 12. In particular, as described at paragraph [0035]:

Another feature of the present invention is to provide a way of discovering and updating wireless links between multiple overlapping or adjacent wireless networks.

Since Gandolfo is discovering and updating wireless links between multiple overlapping or adjacent wireless networks, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, devices 521a-524a, 521b-522b, 521c-523c that are simultaneously within the hearing range of two different networks 505a, 505b, 505c, not “the radio device” as recited in claim 12, will serve the role of wireless links/wireless bridges between the networks 505a, 505b, 505c. In particular, as described at paragraph [0069]:

In a scatternet 500 such as the one described above with reference to FIG. 5, devices 521a-524a, 521b-522b, 521c-523c that are simultaneously within the hearing range of two different networks 505a, 505b, 505c, will serve the role of wireless links/wireless bridges between the networks 505a, 505b, 505c. Those specific bridging devices are called wireless gateways or proxy nodes.

Since, in Gandolfo, devices 521a-524a, 521b-522b, 521c-523c that are simultaneously within the hearing range of two different networks 505a, 505b, 505c, will serve the role of wireless links/wireless bridges between the networks 505a, 505b, 505c, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, the receiving controller 510a, 510b, not “the radio device” as recited in claim 12, transmits the broadcast message to its respective devices 521a-523a, 521b-522b, which will update their network neighborhood list accordingly. In particular, as described at paragraph [0107]:

Consequently, each device in each network 505a, 505b will have at any given point in time, full topology information for the entire scatternet 500.

Since, in Gandolfo, the receiving controller 510a, 510b transmits the broadcast message to its respective devices 521a-523a, 521b-522b, which will update their network neighborhood list accordingly, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, each device in each network 505a, 505b, not “the radio device” as recited in claim 12, will have at any given point in time, full topology information for the entire scatternet 500. In particular, as described further at paragraph [0107]:

Consequently, each device in each network 505a, 505b will have at any given point in time, full topology information for the entire scatternet 500.

Since, in Gandolfo, each device in each network 505a, 505b will have at any given point in time, full topology information for the entire scatternet 500, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, devices in each network communicate wirelessly *only* with other devices in the same network, not “the radio device” as recited in claim 12. In particular, as described at paragraph [0028]:

Using current networking topologies, devices in each network communicate wirelessly only with other devices in the same network.

Since, in Gandolfo, devices in each network communicate wirelessly only with other devices in the same network, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

Gandolfo, moreover, is discovering and updating the wireless links *between* multiple wireless networks, not “at the radio device” as recited in claim 12. In particular, as described at paragraph [0037]:

Some of these objects are accomplished by way of discovering and updating the wireless links between multiple wireless networks and building communication paths across the multi-hop ad-hoc network.

Since Gandolfo is discovering and updating the wireless links between multiple wireless networks, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, the first controller is within the second usable physical area and the second controller is within the first usable physical area, not “at the radio device” as recited in claim 12. In particular, as described at paragraph [0038]:

The first controller is within the second usable physical area and the second controller is within the first usable physical area.

Since, in Gandolfo, the first controller is within the second usable physical area and the second controller is within the first usable physical area, Gandolfo is not “using the adjacent

positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, the first and second controllers exchange network information data via an ultrawide bandwidth signal, not “at the radio device” as recited in claim 12. In particular, as described further at paragraph [0038]:

In this system the first and second controllers exchange network information data via an ultrawide bandwidth signal.

Since, in Gandolfo, the first and second controllers exchange network information data via an ultrawide bandwidth signal, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, moreover, the one or more first devices is within the second usable physical area, not “at the radio device” as recited in claim 12, and operates as a relay device. In particular, as described at paragraph [0041]:

At least one of the one or more first devices is within the second usable physical area and operates as a relay device.

Since, in Gandolfo, the one or more first devices is within the second usable physical area and operates as a relay device, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

In Gandolfo, finally, the first and second controllers exchange network information data via an ultrawide bandwidth signal passed through the relay device, not “at the radio device” as recited in claim 12. In particular, as described further at paragraph [0041]:

In this system the first and second controllers exchange network information data via an ultrawide bandwidth signal passed through the relay device.

Since, in Gandolfo, the first and second controllers exchange network information data via an ultrawide bandwidth signal passed through the relay device, Gandolfo is not “using the adjacent positioning relationships at the radio device to identify at least one carrier radio station to route the radio transmission,” as recited in claim 12.

The fifth clause of claim 12 recites:

After the identification information has been sent, identifying at least one additional carrier radio station at the radio stations of the radio communications system.

Gandolfo neither teaches, discloses, nor suggests “after the identification information has been sent, identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12. Gandolfo, in fact, mentions no additional carrier radio station at all.

In Gandolfo, rather, the controller-capable device will listen on one or more *previously* configured channels for a random period of time, not to identify “at least one additional carrier radio station,” as recited in claim 12. In particular, as described at paragraph [0074]:

At power-up, the controller-capable device will listen on one or more previously configured channels for a random period of time.

Since the controller-capable device of Gandolfo will listen on one or more previously configured channels for a random period of time, Gandolfo is not “identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12.

If the controller-capable device of Gandolfo creates a new network, moreover, it will preferably select a channel frequency that does not cause any significant interference to potential adjacent networks. In particular, as described at paragraph [0075]:

If the controller-capable device creates a new network, it will preferably select a channel frequency that does not cause any significant interference to potential adjacent networks.

Since the controller-capable device of Gandolfo will preferably select a channel frequency that does not cause any significant interference to potential adjacent networks, Gandolfo is not “identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12.

In Gandolfo, moreover, a non-controller-capable device will listen on one or more *previously* configured channels for a random period of time, not to identify “at least one additional carrier radio station,” as recited in claim 12. In particular, as described at paragraph [0076]:

At initialization, a non-controller-capable device will listen on one or more previously configured channels for a random period of time.

Since the non-controller-capable device of Gandolfo will listen on one or more previously configured channels for a random period of time, Gandolfo is not “identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12.

Each controller 510a, 510b, 510c in the scatternet 500 of Gandolfo, moreover, will periodically send out a beacon to the devices within its usable physical area 550a, 550b, 550c, not to identify “at least one additional carrier radio station,” as recited in claim 12. In particular, as described at paragraph [0077]:

In operation, each controller 510a, 510b, 510c in the scatternet 500 will periodically send out a beacon to the devices within its usable physical area 550a, 550b, 550c.

Since each controller 510a, 510b, 510c in the scatternet 500 of Gandolfo will periodically send out a beacon to the devices within its usable physical area 550a, 550b, 550c, Gandolfo is not “identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12.

The beacons of Gandolfo, moreover, will occasionally include additional *network* information about its associated network 505a, 505b, 505c, not to identify “at least one additional carrier radio station,” as recited in claim 12. In particular, as described further at paragraph [0077]:

Preferably, these beacons, or any other broadcast message for that matter, will occasionally include additional network information about its associated network 505a, 505b, 505c.

Since the beacons of Gandolfo will occasionally include additional network information about its associated network 505a, 505b, 505c, Gandolfo is not “identifying at least one additional carrier radio station at the radio stations of the radio communications system,” as recited in claim 12.

The network information of Gandolfo, moreover, can include a MAC address table of all devices 521a-524a, 521b-522b, 521c-523c associated with the network 505a, 505b, 505c, not to identify “at least one additional carrier radio station,” as recited in claim 12. In particular, as described further at paragraph [0077]:

This network information can include: channel load; available bandwidth per class

of service; a MAC address table of all devices 521a-524a, 521b-522b, 521c-523c associated with the network 505a, 505b, 505c), the respective data rate/link quality of each device 521a-524a, 521b-522b, 521c-523c, any eventual bridging connections that each device 521a-524a, 521b-522b, 521c-523c may have; and the type of service each device 521a-524a, 521b-522b, 521c-523c provides (e.g., printing, scanning, recording, DVD player, TV display).

Since the network information of Gandolfo can include a MAC address table of all devices 521a-524a, 521b-522b, 521c-523c associated with the network 505a, 505b, 505c, Gandolfo is not "identifying at least one additional carrier radio station at the radio stations of the radio communications system," as recited in claim 12.

In Gandolfo, moreover, an unassociated device that does not have an active transmission request will first scan multiple channels (i.e., beacons) before selecting its network 505a, 505b, 505c by choosing a controller 510a, 510b, 510c to associate with, not to identify "at least one additional carrier radio station," as recited in claim 12. In particular, as described at paragraph [0078]:

Before joining a network 505a, 505b, 505c, an unassociated device that does not have an active transmission request will first scan multiple channels (i.e., beacons) before selecting its network 505a, 505b, 505c by choosing a controller 510a, 510b, 510c to associate with.

Since, in Gandolfo, an unassociated device that does not have an active transmission request will first scan multiple channels (i.e., beacons) before selecting its network 505a, 505b, 505c by choosing a controller 510a, 510b, 510c to associate with, Gandolfo is not "identifying at least one additional carrier radio station at the radio stations of the radio communications system," as recited in claim 12.

Finally, in Gandolfo, the device communicates to the controller 510a, 510b, 510c some information about adjacent networks 505a, 505b, 505c that it has collected during the scanning phase, not to identify "at least one additional carrier radio station," as recited in claim 12. In particular, as described at paragraph [0079]:

When the device associates with its selected controller 510a, 510b, 510c, it will preferably communicate to the controller 510a, 510b, 510c some information about adjacent networks 505a, 505b, 505c that it has collected during the scanning phase. This is in addition to any information required by the controller 510a, 510b, 510c for the device to join the network 505a, 505b, 505c.

Since, in Gandolfo, the device communicates to the controller 510a, 510b, 510c some

information about adjacent networks 505a, 505c, 505c that it has collected during the scanning phase, not to identify "at least one additional carrier radio station, Gandolfo is not "identifying at least one additional carrier radio station at the radio stations of the radio communications system," as recited in claim 12. Claim 12 is submitted to be allowable. Withdrawal of the rejection of claim 12 is earnestly solicited.

Claims 13-27 depend from claim 12 and add further distinguishing elements. Claims 13-27 are thus also submitted to be allowable. Withdrawal of the rejection of claims 13-27 is also earnestly solicited.

Claim 28:

The fourth clause of claim 28 recites:

A transmitter to send identification information identifying the at least one carrier radio station, the identification information being transmitted to the first radio station and/or the second radio station so that after the identification information is sent, the radio stations will determine at least one additional carrier radio station to complete the path between the first radio station and the second radio station.

Gandolfo neither teaches, discloses, nor suggests "a transmitter to send identification information identifying the at least one carrier radio station, the identification information being transmitted to the first radio station and/or the second radio station so that after the identification information is sent, the radio stations will determine at least one additional carrier radio station to complete the path between the first radio station and the second radio station," as discussed above with respect to the rejection of claim 12. Claim 28 is thus submitted to be allowable, for at least those reasons discussed above with respect to the rejection of claim 12. Withdrawal of the rejection of claim 28 is earnestly solicited.

**Conclusion:**

Accordingly, in view of the reasons given above, it is submitted that all of claims 12-28 are allowable over the cited references. Allowance of all claims 12-28 and of this entire application is therefore respectfully requested.

Finally, if there are any formal matters remaining after this response, the Examiner is invited to telephone the undersigned to attend to these matters.



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If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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